

CLAIMS

1. A vaccine for treating and/or preventing feline infectious peritonitis, wherein said vaccine comprises a protein comprising
5 an amino acid sequence encoded by a polynucleotide of any one of a) to e) as the active ingredient:

a) a polynucleotide comprising a coding region of the nucleotide sequence of SEQ ID NO: 1;

10 b) a polynucleotide comprising a nucleotide sequence that encodes the amino acid sequence of SEQ ID NO: 2;

c) a polynucleotide comprising a nucleotide sequence with 93% or more homology to a nucleotide sequence of a coding region of the nucleotide sequence of SEQ ID NO: 1;

15 d) a polynucleotide comprising a nucleotide sequence with 93% or more homology to the nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2; and

e) a polynucleotide encoding a continuous amino acid sequence comprising 45 or more amino acid residues, selected from an amino acid sequence encoded by the polynucleotide of any one of a) to d).

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2. A vaccine for treating and/or preventing feline infectious peritonitis, wherein said vaccine comprises a polynucleotide of any one of a) to e) as the active ingredient:

25 a) a polynucleotide comprising a coding region of the nucleotide sequence of SEQ ID NO: 1;

b) a polynucleotide comprising a nucleotide sequence that encodes the amino acid sequence of SEQ ID NO: 2;

30 c) a polynucleotide comprising a nucleotide sequence with 93% or more homology to a nucleotide sequence of a coding region of the nucleotide sequence of SEQ ID NO: 1;

d) a polynucleotide comprising a nucleotide sequence with 93% or more homology to the nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2; and

35 e) a polynucleotide encoding a continuous amino acid sequence comprising 45 or more amino acid residues, selected from an amino acid sequence encoded by the polynucleotide of any one of a) to d).

3. The vaccine of claim 1 or 2, wherein the polynucleotide is the polynucleotide of a) or b).

5 4. An antibody formulation for treating and/or preventing feline infectious peritonitis, wherein said formulation comprises, as an active ingredient, an antibody that can bind to a protein comprising an amino acid sequence encoded by a polynucleotide of any one of a) to e):

10 a) a polynucleotide comprising a coding region of the nucleotide sequence of SEQ ID NO: 1;

b) a polynucleotide comprising a nucleotide sequence that encodes the amino acid sequence of SEQ ID NO: 2;

15 c) a polynucleotide comprising a nucleotide sequence with 93% or more homology to a nucleotide sequence of a coding region of the nucleotide sequence of SEQ ID NO: 1;

d) a polynucleotide comprising a nucleotide sequence with 93% or more homology to the nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2; and

20 e) a polynucleotide encoding a continuous amino acid sequence comprising 45 or more amino acid residues, selected from an amino acid sequence encoded by the polynucleotide of any one of a) to d).

25 5. A method for treating and/or preventing feline infectious peritonitis, wherein said method comprises the process of administering the vaccine of any one of claims 1, 2, and 3 to a cat at least once.

30 6. A method for treating and/or preventing feline infectious peritonitis, wherein said method comprises the process of administering the antibody formulation of claim 4 to a cat at least once.

35 7. A method of testing for feline infectious peritonitis virus infection, wherein said method comprises the steps of:

incubating cat serum with a protein comprising an amino acid

sequence encoded by a polynucleotide of any one of a) to e):

a) a polynucleotide comprising a coding region of the nucleotide sequence of SEQ ID NO: 1;

5 b) a polynucleotide comprising a nucleotide sequence that encodes the amino acid sequence of SEQ ID NO: 2;

c) a polynucleotide comprising a nucleotide sequence with 93% or more homology to a nucleotide sequence of a coding region of the nucleotide sequence of SEQ ID NO: 1;

10 d) a polynucleotide comprising a nucleotide sequence with 93% or more homology to the nucleotide sequence encoding the amino acid sequence of SEQ ID NO: 2; and

e) a polynucleotide encoding a continuous amino acid sequence comprising 45 or more amino acid residues, selected from an amino acid sequence encoded by the polynucleotide of any one of a) to d);
15 and

detecting an antibody that binds to the protein.

8. A feline infectious peritonitis viral infection test reagent, comprising a protein that comprises an amino acid sequence encoded
20 by a polynucleotide of any one of a) to e):

a) a polynucleotide comprising a coding region of the nucleotide sequence of SEQ ID NO: 1;

b) a polynucleotide comprising a nucleotide sequence that encodes the amino acid sequence of SEQ ID NO: 2;

25 c) a polynucleotide comprising a nucleotide sequence with 93% or more homology to a nucleotide sequence of a coding region of the nucleotide sequence of SEQ ID NO: 1;

d) a polynucleotide comprising a nucleotide sequence with 93% or more homology to the nucleotide sequence encoding the amino acid
30 sequence of SEQ ID NO: 2; and

e) a polynucleotide encoding a continuous amino acid sequence comprising 45 or more amino acid residues, selected from an amino acid sequence encoded by the polynucleotide of any one of a) to d).